CLAIMS:

1. An arrangement for receiving a digital signal from a transmission medium, the arrangement comprising:

- input means for receiving a signal from the transmission medium,
- asynchronous sampling means for sampling an analog signal so as to obtain a first signal having asynchronous samples,
- variable equalizer means having an input coupled to the input means, a control signal input for receiving a control signal, and an output for supplying an equalized signal,
- equalizer control signal generator means having an input, and an output for supplying an equalizer control signal, which output is coupled to the control signal input of the equalizer means,
- signal detector means, having an input coupled to the output of the variable equalizer means, and an output for supplying the digital signal, the signal detector means being adapted to detect the digital signal from the equalized signal,
- an output terminal coupled to the output of the signal detector means, for supplying the digital signal,

characterized in that the input of the equalizer control signal generator means is adapted to receive a second signal having asynchronous samples, the equalizer control signal generator means comprises detection means for detecting the instant at which the second signal crosses a predetermined signal value, so as to obtain a detection signal, and means for, in response to said detection signal, deriving the equalizer control signal from at least one asynchronous sample value of the second signal at either side of the instant at which the second signal crosses said predetermined signal value, said equalizer control signal being derived from said at least two samples by means of an operation equivalent to arithmetically combining said at least two asynchronous sample values.

2. An arrangement as claimed in claim 1, characterized in that an input of the asynchronous sampling means is coupled to the input means, and an output of the asynchronous sampling means is coupled to the input of the variable equalizer means, and the

input of the equalizer control signal generator means is coupled to the output of the variable equalizer means, for receiving said second signal having asynchronous samples.

3. An arrangement as claimed in claim 1, characterized in that an input of the asynchronous sampling means is coupled to the input means, and an output of the asynchronous sampling means is coupled to the input of the variable equalizer means and the input of the equalizer control signal generator means, for receiving said second signal having asynchronous samples.

4. An arrangement as claimed in claim 2 and 3, characterized in that, the variable equalizer means comprises a FIR filter.

5. An arrangement as claimed in claim 4, characterized in that the FIR filter is a 3-tap FIR filter preferably having a transfer function $H(z) = C_0 + 2C_1 z^{-1} + C_0 z^{-2}$, C_0 and C_1 being variables which comply with $C0 = 1/2 - C_1$ and which variables have a relationship with the equalizer control signal.

6. An arrangement as claimed in claim 4, characterized in that the FIR filter is a 3-tap FIR filter preferably having a transfer function $H(z) = \Delta + z^{-1} - \Delta z^{-2}$, Δ being a variable having a relationship with the equalizer control signal.

7. An arrangement as claimed in claim 4, characterized in that the FIR filter is a 3-tap FIR filter preferably having a transfer function:
$H(z) = (C_0 + \Delta) + 2C_1 z^{-1} + (C_0 - \Delta) z^{-2}$, where C_0, C_1 and Δ are variables having a relationship with the equalizer control signal which complies with $C_0 = \frac{1}{2} - C_1$.

8. An arrangement as claimed in claim 1, characterized in that an input of the asynchronous sampling means is coupled to the output of the variable equalizer means, and the input of the equalizer control signal generator means is coupled to an output of the asynchronous sampling means, for receiving said second signal having asynchronous samples.

9. An arrangement as claimed in any of the preceding claims, characterized in that said arithmetic combination means complies with the formula:

$S(t) = c \times | X(t) - X(t-1) |$, where X(t) is a sample of the second signal directly following said instant, X(t-1) is a sample of the second signal directly preceding said instant, c is a constant, and S(t) is an intermediate signal for deriving said equalizer control signal.

10. An arrangement as claimed in any of claims 1 to 7, characterized in that said arithmetic combination means comply with the formula:
$S(t) = c \times (X(t) - X(t-1))$, where X(t) is a sample of the second signal directly following said instant, X(t-1) is a sample of the second signal directly preceding said instant, c is a constant, and S(t) is an intermediate signal for deriving said equalizer control signal.

11. An arrangement as claimed in any of claims 9 or 10, characterized in that the equalizer control signal generator means comprise means for averaging the intermediate signal so as to obtain an averaged signal, the equalizer control signal being generated in response to said average signal.

12. An arrangement as claimed in any of the preceding claims, characterized in that the equalizer control signal generator means comprises a look-up table in order to obtain the equalizer control signal in response to the first control signal.